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10/677,744

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Michael C. Dapp

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MILES & STOCKBRIDGE PC
1751 PINNACLE DRIVE
SUITE 500
MCLEAN, VA 22102-3833

EXAMINER

YIGDALL, MICHAEL J

ART UNIT

PAPER NUMBER

2192

MAIL DATE

DELIVERY MODE

09/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/677,744

Applicant(s)

DAPP ET AL.

Examiner

Michael J. Yigdall

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2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003 and 13 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Attachment(s)

3) Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date:

04/13/2005, 03/23/2006, 12/22/2006, 04/17/2007 and 07/17/2007.

DETAILED ACTION

1. Claims 26-34 are pending. A priority date of February 28, 2003 is considered.

Specification

2. The attempt to incorporate subject matter into this application by reference to other applications is ineffective because the reference documents are not clearly identified as required by 37 CFR 1.57(b)(2). Specifically, the application numbers provided in the disclosure are incomplete (specification, page 12, lines 15-23). Appropriate correction is required.

Claim Objections

3. Claim 28 (new) is objected to because it recites a dependency on claim 2, which was canceled. Appropriate correction is required. The examiner presumes that Applicant intended for claim 28 to refer to claim 27.
4. Claim 29 (new) is objected to because it recites a dependency on claim 3, which was canceled. Appropriate correction is required. The examiner presumes that Applicant intended for claim 29 to refer to claim 28.
5. Claim 30 (new) is objected to because it recites a dependency on claim 2, which was canceled. Appropriate correction is required. The examiner presumes that Applicant intended for claim 30 to refer to claim 27.
6. Claim 32 (new) is objected to because it recites a dependency on claim 6, which was canceled. Appropriate correction is required. The examiner presumes that Applicant intended for claim 32 to refer to claim 31.

7. Claim 34 (new) is objected to because it recites a dependency on claim 8, which was canceled. Appropriate correction is required. The examiner presumes that Applicant intended for claim 34 to refer to claim 33.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claim 33 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,188,168 to Liao (now made of record, "Liao").

With respect to claim 33 (new), Liao teaches a method for dynamically reconfiguring a parser accelerator (see, for example, column 5, lines 4-15, which shows a programmable hardware parser apparatus, and column 19, lines 40-47, which shows dynamically reconfiguring the apparatus) comprising:

electronically providing a grammar specification including a specification of desirable performance characteristics of the parser accelerator (see, for example, column 6, lines 1-12, which shows providing a grammar specification in the form of GPCL that specifies performance rules and policies for the apparatus);

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providing a parser accelerator having a finite state machine and a state table memory (see, for example, FIG. 3 and column 13, lines 52-55 and 62-66, which shows a parser comprising a finite state machine and state table memory);

compiling the grammar to generate finite automata (see, for example, FIG. 1 and column 8, lines 14-22, which shows compiling a GPCL program to generate finite automata);

creating a finite state machine state transition specification from the finite automata (see, for example, column 9, lines 26-34, which shows that a state transition specification is created from the finite automata); and

loading the finite state machine state transition specification into the state table memory (see, for example, column 13, lines 55-56, which shows loading a data structure that represents the state transition specification into the state table memory).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao in view of U.S. Pub. No. 2004/0073870 to Fuh et al. (recorded on IDS dated 03/23/2006, "Fuh").

With respect to claim 26 (new), Liao teaches a parser accelerator apparatus having an adaptive learning capability (see, for example, column 5, lines 4-15, which shows a programmable hardware parser apparatus), the apparatus comprising:

- a finite state machine configured to parse a document (see, for example, FIG. 3 and column 13, lines 62-66, which shows a finite state machine for parsing an input stream);

- a memory configured to store at least one state table (see, for example, column 13, lines 52-55, which shows memory for storing a data structure that represents a state table);

- a token buffer configured to store at least one token received from the finite state machine (see, for example, column 14, lines 19-22, which shows that the finite state machine recognizes tokens, and column 15, lines 35-38, which shows a buffer for storing such tokens);

- a parser accelerator compiler configured to compile a grammar specification and to generate a state transition specification (see, for example, compiler 102 in FIG. 1 and column 8, lines 14-22, which shows a parser compiler for compiling a GPCL program and generating a state transition specification, and column 7, lines 16-38, which shows that the GPCL program comprises a grammar specification).

Liao does not expressly disclose that the state transition specification is generated in a self describing format.

However, in an analogous art, Fuh teaches an apparatus comprising a compiler, a parser and a loader (see, for example, FIGS. 2 and 10, and paragraphs [0031] and [0050]). Fuh teaches that the parser employs a state transition table (see, for example, paragraph [0039], lines 16-18) that corresponds to a state transition specification in the form of an XML schema definition (see, for example, paragraph [0034]). Thus, the state transition specification is written in a self-

describing format (see, for example, FIG. 4). Such a format is well known in the art and facilitates interoperability (see, for example, paragraph [0003]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Liao such that the state transition specification is generated in a self describing format, as Fuh suggests, so as to facilitate interoperability.

Liao in view of Fuh further teaches or suggests:

a parser accelerator loader configured to load the memory with a state table corresponding to the state transition specification (see, for example, Liao, column 13, lines 55-56, which shows a loader for loading the memory with the data structure that represents a state table corresponding to the state transition specification),

wherein the parser accelerator compiler and the parser accelerator loader are configured to reconfigure the parser accelerator in response to detected data patterns in an electronic document in substantially real time, thereby adapting over time to provide a learning capability (see, for example, Liao, column 19, lines 40-47, which shows that the apparatus is reconfigured in substantially real time, and column 8, lines 23-28, which shows that the parser compiler detects data patterns in an electronic document to reconfigure the apparatus).

With respect to claim 27 (new), Liao teaches a method for dynamically reconfiguring a parser accelerator (see, for example, column 5, lines 4-15, which shows a programmable hardware parser apparatus, and column 19, lines 40-47, which shows dynamically reconfiguring the apparatus) comprising:

providing a grammar specification (see, for example, column 6, lines 1-12, which shows providing a grammar specification in the form of GPCL);

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providing a parser accelerator having a finite state machine and a state table memory (see, for example, FIG. 3 and column 13, lines 52-55 and 62-66, which shows a parser comprising a finite state machine and state table memory);

compiling the grammar to generate finite automata (see, for example, FIG. 1 and column 8, lines 14-22, which shows compiling a GPCL program to generate finite automata);

creating a finite state machine state transition specification from the finite automata (see, for example, column 9, lines 26-34, which shows that a state transition specification is created from the finite automata).

Liao does not expressly disclose that the finite state machine state transition specification is created in a self describing format.

However, in an analogous art, Fuh teaches an apparatus comprising a compiler, a parser and a loader (see, for example, FIGS. 2 and 10, and paragraphs [0031] and [0050]). Fuh teaches that the parser employs a state transition table (see, for example, paragraph [0039], lines 16-18) that corresponds to a state transition specification in the form of an XML schema definition (see, for example, paragraph [0034]). Thus, the state transition specification is written in a self-describing format (see, for example, FIG. 4). Such a format is well known in the art and facilitates interoperability (see, for example, paragraph [0003]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Liao such that the finite state machine state transition specification is created in a self describing format, as Fuh suggests, so as to facilitate interoperability.

Liao in view of Fuh further teaches or suggests:

loading the finite state machine state transition specification into the state table memory (see, for example, Liao, column 13, lines 55-56, which shows loading a data structure that represents the state transition specification into the state table memory).

With respect to claim 28 (new), the rejection of claim 27 is incorporated, and Liao in view of Fuh further teaches or suggests that the self-describing format is a mark-up language (see, for example, Fuh, paragraph [0003], which shows extensible mark-up language).

With respect to claim 29 (new), the rejection of claim 28 is incorporated, and Liao in view of Fuh further teaches or suggests that the mark-up language is extensible mark-up language (XML) (see, for example, Fuh, paragraph [0003], which shows extensible mark-up language or XML).

With respect to claim 30 (new), the rejection of claim 27 is incorporated, and Liao in view of Fuh further teaches or suggests that the grammar specification includes a specification of desirable performance characteristics of the parser accelerator (see, for example, Liao, column 6, lines 1-12, which shows that the grammar specification includes performance rules and policies for the apparatus).

With respect to claim 31 (new), Liao teaches a parser accelerator apparatus having an adaptive learning capability (see, for example, column 5, lines 4-15, which shows a programmable hardware parser apparatus), the apparatus comprising:

a finite state machine configured to parse a document (see, for example, FIG. 3 and column 13, lines 62-66, which shows a finite state machine for parsing an input stream);

a memory configured to store at least one state table (see, for example, column 13, lines 52-55, which shows memory for storing a data structure that represents a state table);

a parser accelerator compiler configured to compile a grammar specification and to generate a state transition specification (see, for example, compiler 102 in FIG. 1 and column 8, lines 14-22, which shows a parser compiler for compiling a GPCL program and generating a state transition specification, and column 7, lines 16-38, which shows that the GPCL program comprises a grammar specification).

Liao does not expressly disclose that the state transition specification is generated in a self describing format comprising a mark-up language.

However, in an analogous art, Fuh teaches an apparatus comprising a compiler, a parser and a loader (see, for example, FIGS. 2 and 10, and paragraphs [0031] and [0050]). Fuh teaches that the parser employs a state transition table (see, for example, paragraph [0039], lines 16-18) that corresponds to a state transition specification in the form of an XML schema definition (see, for example, paragraph [0034]). Thus, the state transition specification is written in a self-describing format comprising a mark-up language (see, for example, FIG. 4). Such a format is well known in the art and facilitates interoperability (see, for example, paragraph [0003]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Liao such that the state transition specification is generated in a self describing format comprising a mark-up language, as Fuh suggests, so as to facilitate interoperability.

Liao in view of Fuh further teaches or suggests:

a parser accelerator loader configured to load the memory with a state table corresponding to the state transition specification (see, for example, Liao, column 13, lines 55-56, which shows a loader for loading the memory with the data structure that represents a state table corresponding to the state transition specification),

wherein the parser accelerator compiler and the parser accelerator loader are configured to reconfigure the parser accelerator in response to a changed condition (see, for example, Liao, column 19, lines 40-47, which shows reconfiguring the apparatus, and column 8, lines 23-28, which shows that the apparatus is reconfigured in response to a changed condition such as a pattern in a document).

With respect to claim 32 (new), the rejection of claim 31 is incorporated, and Liao in view of Fuh further teaches or suggests that the changed condition comprises a pattern in a document (see, for example, Liao, column 8, lines 23-28, which shows that the apparatus is reconfigured in response to a pattern in a document).

12. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liao, as applied to claim 33 above, in view of Fuh.

With respect to claim 34 (new), the rejection of claim 33 is incorporated. Liao does not expressly disclose that creating a finite state machine state transition specification from the finite automata comprises creating a finite state machine state transition specification in extensible mark-up language (XML).

However, in an analogous art, Fuh teaches an apparatus comprising a compiler, a parser and a loader (see, for example, FIGS. 2 and 10, and paragraphs [0031] and [0050]). Fuh teaches

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that the parser employs a state transition table (see, for example, paragraph [0039], lines 16-18) that corresponds to a state transition specification in the form of an XML schema definition (see, for example, paragraph [0034]). Thus, the state transition specification is written in extensible mark-up language or XML (see, for example, FIG. 4). Such a language is well known in the art and facilitates interoperability (see, for example, paragraph [0003]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Liao such that creating a finite state machine state transition specification from the finite automata comprises creating a finite state machine state transition specification in extensible mark-up language (XML), as Fuh suggests, so as to facilitate interoperability.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure (see the attached Notice of References Cited).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is (571) 272-3707. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Yigdall
Examiner
Art Unit 2192

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A handwritten signature in black ink, reading "Michael Yigdall". The signature is written in a cursive style with a large, stylized initial "M".